

# Rackets, Regulation and the Rule of Law\*

Timothy Frye

Department of Political Science, Ohio State University

Ekaterina Zhuravskaya

Russian European Center for Economic Policy (RECEP)

Center for Economic Policy Research (CEPR)

## Abstract

Governments that levy predatory regulation and provide few weak legal institutions draw businesses into the unofficial economy and compel them to hire private protection organizations. Based on a survey of shopkeepers in three cities in Russia, we find that retail shops face very high levels of predatory regulation and have frequent contacts with private protection rackets. In addition, we show that higher levels of regulation are associated with weaker legal institutions and a higher probability of contact with a private protection organization. We also find that shopkeepers view private protection organizations primarily as a substitute for state-provided police protection and state-provided courts. These results emphasize the importance of public sector reform as a component of economic transition.

## **Introduction**

The rise of the racket in post-communist Russia is well acknowledged, but debates about its sources and functions persist (Anderson, 1995; Handelman, 1995; Aslund, 1997; Millar, 1997). The difficulty of collecting data on the topic means however that debates are often based on anecdotal or impressionistic evidence. We begin to explore these issues in a more systematic fashion by focusing on one sector of the Russian economy - retail trade. Using a survey of shopkeepers in three Russian cities we provide measures of regulatory burden and reliance on private protection. We test for evidence of relationships among the level of regulation, the performance of legal institutions, and the probability of contact with private protection rackets. We present the following findings. First, small shops in Russia are subjected to extensive regulation and rely heavily on private protection rackets, in particular, when compared to shopkeepers in Poland and Romania.

Second, the level of regulation is positively related to the use of private protection. Shopkeepers in our survey who faced particularly extensive regulations were more likely to have had contact with private protection rackets than shopkeepers who faced a lighter regulatory burden.

Third, shopkeepers viewed private protection primarily as a substitute for state-provided police protection, and to a lesser extent, for state-provided courts. Many believe that private protection imposes significant costs across the economy, but for individual shopkeepers having a relationship with a private protection racket can be a rational strategy where regulations are extensive and the government provides little protection (Olson, 1993). At a minimum, shopkeepers believed that their relationships with private protectors was not purely exploitative.

Fourth, we find some evidence that the level of regulation is related to the performance of legal institutions and to managers' perceptions of local government's support for private business.

Where state regulation was comparatively light, legal institutions performed better and local governments were seen to be more supportive of private business.

Several works recognize that high levels of regulation can increase incentives for private firms to operate in the unofficial economy and speculate that firms operating in the unofficial economy will be more likely to use private protection (Kaufmann and Kaliberda, 1996; Aslund, 1997; Frye and Shleifer, 1997; Frye, 1997; Johnson, Kaufmann, and Shleifer, 1998; Johnson, Kaufmann, and Zoido-Lobaton, 1998; Frye, 2000; Johnson, Macmillan and Woodruff, 1998; 1999a, 1999b). This work extends existing literature by finding an empirical relationship on the micro level between predatory local regulation and the probability of contact between firms and private protection organizations, and the performance of legal institutions in a transition economy.

Scholars and policymakers have come to recognize the importance of legal institutions for economic development (North, 1990; Klitgaard, 1995; Sachs and Pistor, 1997; Clague, 1997). International financial organizations that previously expressed little interest in legal reform have promoted a revival of “the rule of law” in recent years and devoted millions of dollars to promote stronger legal institutions in a wide range of developing countries (World Bank, 1997; Carothers, 1998). This paper illustrates the importance of building legal institutions and reducing the scope of predatory regulations facing private businesses in transition economies.

This work also provides evidence for a growing theoretical literature on private protection. Early work of Schelling (1971) examines how market structure affects the efficiency consequences of private protection, while Buchanan (1973) demonstrates the economic advantages of organized over disorganized crime. The 1990s have spawned a second wave of theoretical literature on private protection (Olson, 1993; Sachs, 1994; Gianlucca and Peltzman, 1994; Grossman, 1996). This formal literature builds on many ideas from the seminal work of Diego Gambetta (1993) who

---

treats the Mafia in southern Italy as a business that sells private protection to its customers. Yet, the formal models of the second wave of this literature have rarely been tested empirically. It is hardly surprising, given the difficulty of collecting evidence on the topic.<sup>1</sup> This work begins to rectify this shortcoming.

In section 1, we define terms. In section 2, we draw on the existing literature for our theoretical framework and hypotheses. In section 3, we describe the survey and present summary statistics on the regulatory environment and the role of private protection. In section 4, we present evidence of a positive relationship between levels of regulation and the probability of contact with private protection rackets. In section 5, we present shopkeepers' views of the role that private protection plays in the local economy. In section 6, we present evidence of a relationship between levels of regulation, government's support for private business and the performance of legal institutions. In section 7, we briefly discuss the implications of our findings for economic growth. In section 8, we conclude.

## **1. Defining Terms: Private Protection, Unofficial Economies, and Regulation**

We borrow a definition of private protection organizations from Gambetta (1993:3). By private protection organization we mean a “specific economic enterprise, an industry which produces, promotes and sells private protection.” In common parlance, these are the types or organizations that are included in the Russian terms *roof* or ‘*krysha*,’ and racket or ‘*reket*’. Formally, these organizations may be legal or illegal, depending on whether their activities are sanctioned by the state, but both are private organizations that provide protection for a fee. The lack of legal authorization by the state distinguishes private protection organizations in Russia from their counterparts in more developed economies. In Russia, both legal and illegal private protection organizations commonly provide forms of protection that are not permitted by the state.

For example, private protection organizations may use threats or violence against the party with which their client has a dispute even where both parties in the dispute are engaged in a perfectly legal business. In addition, competing protection organizations often use violence against each other while pursuing the same customers. In developed economies, private protection is either regulated by the state or is related to organized crime.<sup>2</sup> In Russia and several other transition economies private protection organizations are weakly regulated by the state and may or may not be linked to organized crime.

We draw a distinction between the official and the unofficial economy. By unofficial economy, we mean unreported (and hence untaxed) economic activity. Firms may be registered with state authorities and conduct part of their business in the official (and hence taxed) economies. These same firms however may also conduct a large part of their business in the unofficial economy to avoid taxes and regulations.<sup>3</sup> Indeed, given the size of the Russian state, it is difficult for firms to operate completely underground. Inspectors who often retain a portion of the fines that they levy have strong fiscal incentives to find unregistered firms.<sup>4</sup> Thus, firms in Russia usually are registered, but many operate primarily in the unofficial economy. These firms are the focus of our study.

Finally, by regulation we mean governmental rules that allow government officials to collect bribes in exchange for relief from these rules.<sup>5</sup> Regulations may include the rules by which shops are inspected, registered, and licensed. Regulations are not inherently bad and there is an efficient level of regulation.<sup>6</sup> Regulation tends to be overproduced, however, because government officials can receive bribes by granting relief from the rules. Excessive regulation increases costs and decreases the profitability of shops.

## **2. Theoretical Framework**

Johnson, Kaufmann, and Shleifer (1998) present a simple formal model which generates testable hypotheses for our study. In their model, the government chooses a level of regulation, which is conceived broadly to include “taxes, and perhaps corruption.” Based on expected profits and the costs of regulation, private firms choose to abide by regulations (pay taxes), operate in the official economy, and rely on the state for protection. Or, if they believe they cannot make a profit after paying the costs of regulation, they avoid taxes, operate in the unofficial economy, and rely on private protection rackets to protect their property rights.

The decisions of private firms to operate in the official or unofficial economy have implications for government finances. Private firms that choose to operate in the official economy increase budget revenue, which in turn, makes the government better able to provide public goods, in particular effective courts and police. Taxes paid to the state increase the size of the official sector and allow the state to “outcompete” rackets as a protector of property rights. Conversely, private firms that choose to operate in the unofficial economy pay taxes to private protection rackets, deprive the state of revenue, and allow rackets to “outcompete” the state. The Johnson, Kaufmann and Shleifer model produces two stable equilibria. In one equilibrium, low levels of regulation allow shops to stay in the official economy and rely on the state for protection. In a second equilibrium, high levels of regulation force shops to operate in the unofficial economy and rely on the racket for protection.<sup>7</sup> If firms choose to have some of their operations in the official economy, any increase in the level of regulation will drive more of their operations into the unofficial economy and *vice versa*.<sup>8</sup>

Firms with substantial operations in the unofficial economy cannot rely on the state to protect this portion of their business. For example, according to the Russian Civil Code state courts cannot enforce contracts that in some way violate Russian law (Frye, 1997; Hay and Shleifer, 1998). Firms have strong incentives to hire private organizations to enforce contracts,

protect property and defend operations hidden in the unofficial economy. Moreover, having entered the unofficial economy, these firms become more vulnerable to extortion by private protection rackets who know that unofficial operations are not protected by state courts and police.

This logic generates testable hypotheses. Higher levels of regulation should be associated with a larger unofficial economy, weaker legal institutions, and greater reliance on the racket to protect property and enforce contracts. Lower levels of regulation should be associated with a smaller unofficial economy, stronger legal institutions, and greater reliance on the state for protection of property rights.

We test this logic as a comparative statics exercise and assess how variation across shops in the level of regulation is related to variation in their use of private protection rackets and variation in the performance of legal institutions, such as state courts. We recognize the existence of reciprocal connections between the performance of legal institutions and the level of regulation.<sup>9</sup> Therefore, we are reluctant to make strong claims about the direction of causality.

### **3. The Survey, the Cities, and the Shops**

To test hypotheses outlined in the previous section, we conducted a survey of 230 small shops in three Russian cities: Moscow, (77 shops) Ulyanovsk, (70 including 9 state-owned shops) and Smolensk, (83 shops) in the spring and summer of 1996.<sup>10</sup> Each shop in the survey had less than 50 employees and was chosen at random from a business directory in each city. The shops included small grocery stores, hair salons, bookstores, liquor stores, auto parts stores, etc. The survey included private and privatized shops, and a handful of state shops in Ulyanovsk - the only city where state-owned small shops have a noticeable presence.<sup>11</sup>

The survey consisted of 44 questions about the shops, their legal and regulatory environment, and use of private protection rackets.<sup>12</sup> The authors and several research assistants

conducted face-to-face interviews in Russian with the shopkeepers (owners or top managers) at the shops. Response rates were relatively high: roughly 60% in Moscow and 75% in both Smolensk and Ulyanovsk.

A few questions in the survey raised the sensitive issue of private protection. We posed some of these questions in the third person to give respondents the opportunity to express their opinion about the general environment of small business in their city without revealing information about their personal experiences. For example, we asked: “What functions do you believe that the rackets serve in your city?” By allowing shopkeepers to answer in the third person, we believe that they would have weaker incentives to implicate themselves.<sup>13</sup>

We also posed some questions about private protection that required shopkeepers to recount their personal experience. For example, we asked: “Has your shop had contact with the racket in the last six months?” and “has your shop ever had contact with the racket?”<sup>14</sup> The sensitive nature of these questions reduces our confidence in the validity of all the responses, and respondents may have had an incentive to understate the role of the racket, however, we believe that the data paint a roughly accurate picture for three reasons.

First, we conducted interviews with a sub-sample of 17 shopkeepers who were previously known to one of the researchers and therefore likely had less incentive to mislead. The results from this sub-sample did not differ from the larger sample and their responses are included in our analysis. Second, we found that answers were not markedly different across the five interviewers in our study. Third, the problem of private protection is a very common topic of discussion in the Russian media. As one shopkeeper in Moscow noted: “Everyone knows how common rooffs are. No, I don’t mind talking about it.” Despite the sensitive nature of some questions in the survey and the difficulty of conducting research in post-communist Russia, we believe that our depiction



of relationships among private business, local government, and private protection rackets is roughly accurate.

### The Cities

Moscow, Smolensk, and Ulyanovsk are large cities located in the European part of Russia. Smolensk and Ulyanovsk are the capitals of their respective regions, while Moscow itself has a special administrative status of a region. In the post-communist era the local governments of these three cities have chosen relatively different economic strategies.<sup>15</sup> As of 1996, Ulyanovsk had few private shops; most shops were still state-owned and price controls were still in place for many goods. Politically, the city had seen very little turnover among the political elite since 1989 and was widely viewed as a stronghold for the Russian Communist Party.<sup>16</sup>

Moscow relied on liberalized market forces, but maintained close ties between the city government and private business. Prices had been liberalized, but some subsidies remained on a handful of staples, like bread. Turnover among the political elite had been higher than elsewhere in the region, and the city is widely seen as a stronghold for liberal political candidates.

In some respects, Smolensk employed a more liberal economic reform strategy than either Ulyanovsk or Moscow. Most prices had been liberalized by the time of the survey and the privatization of small shops proceeded at a rapid pace. As in Moscow, turnover among the political elite had been high between 1989 and 1996.

---

Place Table 1 here

---

### The Shops

Table 1 presents descriptive statistics for the shop characteristics in the three cities. On average, shops in our sample had just under 17 employees. Moscow shops were larger than shops

in Smolensk and Ulyanovsk. Shops in Moscow had 25 employees, while shops in Ulyanovsk and Smolensk had 15 and 10 respectively. This difference is likely due to Moscow's greater proportion of privatized versus private shops, as privatized shops tend to have more employees.

Across cities, the shops had been open for a comparable period of time. On average, shops had been operating for 3.5 years. The mix of state, privatized, and private shops varied across cities. Most important, Ulyanovsk was the only city to have state shops, and nine are included in the sample. Ulyanovsk also had a high percentage of private (as opposed to privatized) shops in its non-state sector, primarily because the local government in Ulyanovsk has conducted privatization very slowly. The ratio of private shops to privatized shops among the non-state shops was 95% in Ulyanovsk, 82% in Smolensk, and 44% in Moscow.

The intensity of market competition differed across cities as well. Market competition was weakest in the state-dominated economy of Ulyanovsk and strongest in the least regulated economy of Smolensk. Shopkeepers in Ulyanovsk identified only 2.49 competitors in their neighborhood, while shopkeepers in Smolensk and Moscow reported 5.23 and 3.59 competitors. Despite some differences, we have a broadly comparable set of shops.

---

Place Table 2 here

---

### Regulatory Environment

Our survey asked a variety of questions about the regulatory environment facing shopkeepers.<sup>17</sup> Table 2 suggests that the level of regulation in Russia is relatively high. On average, shopkeepers needed over two months to register their shop, almost four months to receive all necessary permits, and had to receive permits from more than five agencies to open their shop.

Moreover, the average shop was inspected eighteen times per year and 83% of shopkeepers reported paying fines to inspectors within the last year.

These figures are high, particularly in comparison to similar studies in Poland and Romania. Frye and Shleifer (1997) find that shopkeepers in Warsaw could register a shop in three weeks, were inspected nine times per year and were fined by inspectors in only 46% of the cases. Similarly, Pop-Eleches (1997) finds that shops in Sibiu, Romania could register a business in 5 weeks, were inspected 12 times per year on average, and only 30% of shops reported paying fines in the last year.<sup>18</sup>

Regulation was generally more extensive in Ulyanovsk than in either Smolensk or Moscow. On average, shopkeepers in Ulyanovsk needed almost 9 permits to open their shop and the entire registration process took about 5 months. Shopkeepers in Ulyanovsk were inspected almost 22 times per year, while their counterparts in Smolensk and Moscow were inspected less frequently, 16.2 and 16.3 times per year respectively.

Shopkeepers in Smolensk faced a lighter regulatory burden. The registration process required fewer permits (5.3) and less time (about 10 weeks) than in other cities. Shopkeepers in Smolensk were less likely to be fined by inspectors than their counterparts in Ulyanovsk or Moscow. On average, inspectors fined shopkeepers during 19% of their visits in Smolensk, while the corresponding figure was 38% in Ulyanovsk and 37% in Moscow.

---

Place Table 3 here

---

### Private Protection

Our survey asked several questions about the use of private protection rackets. Table 3 suggests that the probability of contact with the racket is high in Russia, particularly in comparison to Warsaw and Sibiu. For example, in Ulyanovsk, Smolensk, and Moscow the percentages of

shops that reported having had contact with the racket in the last six months were 41.7%, 40.7%, and 47.4%, respectively. The comparable figure for Warsaw was only 8% (Frye and Shleifer, 1997). No shopkeepers in Sibui reported having had contact with the racket in the last six months (Pop-Eleches, 1997).<sup>19</sup>

#### **4. Regulation and Private Protection**

In this section, we begin to test for a relationship between the level of regulation and the probability of contact with a private protection organization. We regress “racket in the last 6 months,” a dummy variable that equals 1 if the shop had contact with the racket in the last six months, and 0 if it did not, on several proxies for regulation controlling for any city-level variation. Our proxies for the level of regulatory burden on a shop include the time required to open a shop, the number of permits needed to open a shop, the number of different agencies shopkeepers need to visit to open a shop, the average number of inspections per year, and the length of time needed to register a shop.

We explore variation in regulation across shops for a given city. Levels of regulation varied greatly across shops within each city. None of the observable shop characteristics, such as the size of the shop, its type, number of competitors, number of years in operation, location, or the experience of its director, are significant in explaining the variation in regulation between shops for a given city.<sup>20</sup> Johnson, McMillan, and Woodruff (1998; 1999a; 1999b) also find significant variation in the level of regulation across shops within cities in their study. Three factors may account for this variation. First, local regulatory agencies likely lacked sufficient coherence to implement a consistent strategy across shops within a city. Second, the level of regulation facing shopkeepers within a given city may have depended on certain unobservable characteristics of the firms, such as the personal ability of shopkeepers to negotiate with regulators. Third, variation in

our measures of regulatory burden within a city may reflect variation in shopkeepers' perceptions of the regulatory environment, rather than the regulatory environment itself. Since the shopkeepers' perceptions about their regulatory burden define their decisions to operate in the official or unofficial economy, we can base our tests on measures of these perceptions, rather than on direct measures of the regulatory burden.

The strategy of analyzing variation in regulation and contact with the racket within a city has several advantages. By looking at the regulatory burden as a shop-level characteristic within a given city, we examine how the variation in shopkeepers' perception of regulatory burden is related to the variation in the probability that shops had contact with the racket.<sup>21</sup> Moreover, we control for a variety of initial conditions within each city that may affect the probability of having contact with the racket, such as the general level of crime, which in turn, is determined by many factors that we are unable to control for directly.

We run regressions for each regulation proxy measure separately controlling for the property type of the shop and dummy variables for each city.<sup>22</sup> We expect state-owned shops to be less regulated than private or privatized shops because local governments have weaker incentives to regulate firms that they own. We also expect that state-owned shops should be less likely to have had contact with the racket. Private protection rackets may have weaker incentives to contact state shops than private shops, in part because it may be easier for state shops to call on the state for protection than for private shops to do so.<sup>23</sup>

---

Place Table 4 here

---

Table 4 presents the results of these regressions. We find that each of our five measures of regulation is significantly and positively related to the probability of contact between shopkeepers and private protection rackets. An increase in each individual measure of regulation – the length

of time need to open a shop, the number of permits needed to open a shop, the number of agencies visited to open a shop, the number of inspections, and the length of time needed to complete the registration process - increases the probability of a shop having had contact with the racket. We report the results controlling for city differences.<sup>24</sup> If we do not control for city differences, the results are even stronger. Thus this finding is rather robust.<sup>25</sup>

The economic significance of this result can be stated more precisely. Holding city constant, for a given city, an additional month needed to open a shop increases the probability of contact between shopkeepers and racketeers by 2 percentage points - from 45% to 47%.<sup>26</sup> An additional permit required to open a shop increases the probability of contact with the racket by 2 percentage points. An additional agency that a shopkeeper needs to visit for registration increases the probability of contact with the racket by 5 percentage points. An additional inspection per month increases the probability that a shopkeeper has had contact with a racketeer by 2.4 percentage points.

The regression results support the view that high levels of regulation tend to be associated with an increase in the probability that a shopkeeper has had contact with the racket in the last six months. As this finding holds across a range of proxy variables, we consider the relationship robust.

## **5. The Functions of Private Protection**

The rise of private protection in Russia has provoked debate about the functions of these so-called “roofs.” Some view private protection organizations primarily as exploiters who take advantage of shopkeepers. Others view private protection organizations primarily as suppliers of protection that respond to demand from shopkeepers who have little confidence in the ability of

the government to protect property rights (Hay and Shleifer, 1998). Our survey sheds some light on these competing views.

---

Place Table 5 here

---

To gain insight into this debate, we asked shopkeepers to identify which of the following functions they believed that the racket provided. Table 5 reports their answers and indicates that shopkeepers believe that private protection rackets primarily provide two services. First, they provide basic protection from other rackets and from criminals. Second, and to a lesser extent, they help enforce agreements. These results suggest that private protection serves first as a substitute for the notoriously ineffective Russian police forces. To a lesser extent, it also serves as a substitute for the notoriously ineffective Russian state courts.<sup>27</sup> We found little support for the view that private protection organizations are used to deal with state officials, as an investment source, or to attract customers.

It may seem that providing protection from other rackets and bandits is somewhat removed from the problem of predatory regulation, but this is not the case. Having entered the unofficial economy due to predatory regulation, protection by the state ceases to be a viable means to protect property rights because the state adjudicates only contracts made in the official economy. Lacking access to state courts, firms have strong incentives to turn to private protection organizations to defend their unofficial production against seizures by other rackets and bandits. Moreover, firms operating substantially in the informal economy cannot turn to the state to protect them against demands made by private protection organizations. This logic defines the link between the unofficial economy and a reliance on private protection.

---

Place Table 6 here

---

To gain some measure of the severity of the problem of private protection, we asked shopkeepers to rate their biggest problems on a scale of 1-10. Table 6 suggests that shopkeepers view private protection rackets as a relatively minor problem. On average, shopkeepers find that tax rates, a shortage of capital, rent, legal vulnerability, corruption and competition are more significant problems than the racket. The last rows of both panels of Table 6 show that shopkeepers view government corruption as a significantly more important problem for them than is the racket. As one would expect, the racket is not at all a problem for the shops that did not have contact with the racket. The shops that had contact with the racket in the last six months gave “racket” a score of 4.57, however, they perceive the racket as less of a problem than local government corruption which they give a score of 5.7 (the difference is significant at 5% level).

These findings suggest that shopkeepers believe that private protection rackets provide a service and are not simply engaged in extortion. In contrast, the local government is seen primarily as an extractor of resources that provides few benefits. We recognize that private protection rackets are likely to be a second-best outcome when compared to a functioning state. Yet, where local governments levy extensive regulations and provide weak legal institutions, private protection rackets may serve a useful purpose for individual shopkeepers.

## **6. Private Protection, Regulation, and the Performance of Legal Institutions**

The logic of the argument predicts that differences in the level of regulation should produce two stable equilibria. In one equilibrium, the local government levies comparatively low levels of regulation and provides comparatively competent and accessible legal institutions. These policies encourage shopkeepers to operate in the official economy, rely on the state to enforce property rights, and shun private protection organizations. In the other equilibrium, the local government levies extensive regulation and provides weak legal institutions. This mix of state



policies compels shopkeepers to operate in the unofficial economy and turn to a private protection racket to enforce their unofficial economic activity. If this logic is correct, we should find relationships among the levels of regulation, the performance of legal institutions, and the use of private protection rackets.

Formally, courts in Russia are independent and financed by the central government. In practice, the central government is often too weak to protect courts from pressure levied by local politicians. To a great extent, courts in Russia depend on the good will of the local government. Thus, we should not be surprised to find considerable variation in the performance of courts across locales.

To measure the performance of legal institutions more accurately, we asked shopkeepers whether they “needed to use the courts over the last two years, but chose not to do so.” This question seeks to measure whether the local government is able to provide sufficient public goods to satisfy the demands of shopkeepers and avoids some of the problems of relying on the actual use of courts as a measure of public goods.<sup>28</sup> It only examines infractions that were sufficiently serious to warrant the use of courts and allows us to draw a clear inference about shopkeepers’ belief in the efficacy of local courts.

To measure perceptions of local government support for private business we also asked whether shopkeepers thought that the local government helped, was neutral toward, or hindered business in their city. We deliberately made this indicator more abstract because we wanted to capture shopkeepers’ view of their overall relationship with local government. In particular, we wanted to measure the benefit of public goods provided by the local government net of costs of regulation.

---

---

Place Table 7 here

---

Table 7 finds that legal institutions in Smolensk tend to outperform their counterparts in Moscow and Ulyanovsk. Only 26% of small businesses in Smolensk needed to use the courts in the last two years but did not. In contrast, 40% and 49% of shops in Ulyanovsk and Moscow did not use the courts in the last two years, despite having cause to do so. In addition, while few firms in any city believe that the local government helps small business a far lower percentage of shops in Smolensk see the local government as a hindrance.

Shopkeepers in Smolensk showed greater faith in the efficacy of local courts to protect their rights against both business people and the local government, were more likely to have used the courts, and were more likely to have received help from the local government if they asked. Smolensk spent more rubles per capita on police than did Ulyanovsk (43.3 versus 35.7). Shopkeepers in Smolensk also had a more favorable view of the role of local government in the economy. These comparisons may be an indication that legal public goods provision was less efficient and that regulation was heavier in Ulyanovsk than in Smolensk.

---

Place Table 8 here

---

### Regulation and Legal Institutions

Table 8 presents evidence that our measures of the efficacy of courts and the extent to which local governments help businesses are inversely related to the level of regulation for a given city. Shopkeepers, who needed to use the courts but did not, experienced higher levels of regulation than shopkeepers who used courts when needed. Shopkeepers who used courts when needed opened their shops in 1.2 months less time than did shopkeepers who expressed little faith

in the courts. This difference is significant at the 10% level controlling for city differences and the ownership structure of the shop.

Other measures support a negative relationship between regulation and the performance of legal institutions. Controlling for city differences and the ownership structure of the shop, the group of shopkeepers who expressed faith in the courts on average needed to have 2 fewer permits to open their shop (significant at 10%) from 1.5 fewer agencies (significant at 5%) than the group that needed courts but did not use them. The number of inspections is our only measure of regulatory burden that does not differ significantly between the groups.<sup>29</sup>

Table 8 also reveals that shopkeepers who believed that the local government was a hindrance to private business had a higher regulatory burden than shopkeepers who had a more favorable view of the government. Shopkeepers who viewed the government as a hindrance had 6.65 more inspections per year (significant at 10%) by 1.4 more agencies (significant at 5%) and took 2 weeks longer to register (significant at 10%) than did shopkeepers who claimed that the local government supported private business. These results suggest that regulation shapes perceptions of the performance of local government.

#### Private Protection and Public Protection

The efficacy of courts and “the role of local government,” are also inversely related to the incidence of contact with the racket for a given city. Table 8 indicates that shopkeepers who wanted to use the courts but did not in the last two years were significantly more likely to have had contact with a private protection racket. For a given city and ownership structure, the probability of having contact with a racket is 22 percentage points higher for this group on average. Moreover, shopkeepers who rated the role of the local government as negative were significantly more likely to have had contact with a private protection racket than shopkeepers who had a more

positive view of the local government. The difference in the probability of having contact with the racket between shopkeepers who believe that the local government hinders and those who believe that it supports private business is 16 percentage points on average, controlling for city and ownership structure of the shop. Weak legal institutions are associated with a high incidence of contact with a private protection racket and perceptions of a lack of support for local business.

## **7. Implications for Economic Growth**

Consistent with our theoretical framework, we should find that cities with more onerous levels of regulation, weaker legal institutions, and a higher incidence of private protection, such as Ulyanovsk, should be less attractive to small business. We expect to find smaller growth in the number of workers employed in the small business sector and slower growth in the contribution of small business to total industrial output.

---

Place Table 9 here

---

Table 9 suggests that state policies bear consequences for the development of small business across cities. Small shops provide a smaller percentage of total employment and a smaller amount of industrial output in Ulyanovsk (12.1, 7.2, respectively) than in either Smolensk (15.5, 8.5, respectively) or Moscow (19.5, 19.3, respectively).

## **8. Conclusion**

The rule of law has become an increasingly important topic in academia and policy circles (Carothers, 1998). Good governance and institutional adjustment have become the mantra of international financial organizations and scholars interested in economic development. Empirical work on the topic, however, has lagged behind policy choices. This work begins to unravel some

of the links between policy choices, the rule of law and the use of private protection. Based on a survey of shopkeepers in three cities in Russia, we find some evidence of relationships among levels of regulation, the performance of legal institutions, and the incidence of private protection. We find that higher levels of regulation and weak legal institutions are associated with a higher probability of contact with a private protection organization. Our findings demonstrate the need for serious regulatory reform in Russia that would reduce the regulatory discretion of local government. Such a reform may help to draw more business operations into the official economy, which, in turn, may strengthen legal institutions and allow local government to outcompete the private protection organizations.

These findings suggest a broader conclusion. The success of economic reform depends not only on the standard package of stabilization, liberalization, and privatization. It cannot be achieved without a public sector reform that creates incentives for the government to raise its own official tax base and, therefore, to support growth of the official private sector. Reform strategies that rely on less regulation and stronger legal institutions may allow local governments to crowd out the racket.

**Appendix. Descriptive statistics for the variables used in the analysis and the corresponding survey questions**

Variable:	Formulation of question	Mean	SD	Min	Max
Number of employees	“What is the number of employees in your shop?”	16.9	19.5	1	50
Age of director	“What is the age of your director in years?”	39.9	9.4	21	70
Director’s tenure in this shop	“For how many years has your director worked for this shop?”	4.57	5.9	0.1	40
Experience as director	“For how many years has your director worked as a director in any shop?”	11.5	10.8	0.2	44
Years from opening/ privatization of the shop	“How many years have passed from the opening or privatization of your shop?”	3.50	5.5	0	96
Number of competing shops in the neighborhood	“What is the number of shops in your neighborhood that are in the same line of business and that you consider to be your competitors?”	4.02	8.9	0	100
Time to register shop	“How many months did it take you to register the shop?”	2.02	2.8	0	24
Number of permits required to open	“How many permits did you have to collect to open the shop?”	7.45	7.2	0	40
Number of agencies for registration	“How many local governmental agencies did you have to visit to register your shop?”	5.64	5.6	0	25
Total time needed to open shop	“How many months did it take from the day the decision was made to open the shop until the shop actually opened?”	3.86	4.5	0	24
Number of inspections	“How many inspections do you have per month? Inspections include fire, tax police, health, license, police, trade and other inspections.”	18.1	33.0	1	250
Number of fines	“How often do you pay fines to the inspectors?”	0.28	0.34	0	1
Contacted by racket in 6 months	“Has your shop had contact with the racket in the last six months?”	0.43	0.50	0	1
Contacted by racket ever	“Has your shop ever had contact with the racket?”	0.62	0.49	0	1
Needed courts, but did not use it	“In the last two years have you faced a situation in which you needed to use courts but decided not to?” (Respondents indicated that they did not use courts because of one of the following reasons: courts are too slow, too expensive, too corrupt, too incompetent, there is no enforcement of courts’ decisions, did not want to reveal confidential information, or they feared that “winning the battle could lead to defeat in the war”).	0.37	0.48	0	1
Role of the government	“What is the role of the local government in operation of your shop?: Does it hinder; or have no influence, or does it help?”	-0.28	0.58	-1	1
Used courts in the last two years	“Have you used the courts in last two years?”	0.22	0.44	0	1
Can use courts against government	“Could you successfully use the courts to protect your property rights if they were grossly violated by the government?”	0.33	0.47	0	1
Can use courts against partner	“Could you successfully use the courts to protect your property rights if they were grossly violated by a customer or supplier?”	0.53	0.53	0	1
Asked government for help	“Have you ever asked the local government for help?”	0.33	0.47	0	1
Received help	“Have you received help from the government when you asked for it?”	0.45	0.50	0	1

### **Footnotes**

\* We thank Andrei Shleifer for many helpful comments and general support of this project. We are grateful to Katia Atanassyan, Elena Goldman, Lev Ivanov, and Alexandre Ustinov for excellent research assistance in conducting interviews. We also thank Simon Johnson, Anthony Mughan, Gretchen Rodkey, Gerard Roland, David Rowe, Andrew Spicer, Randall Stone, and Daniel Treisman and the anonymous referees for valuable comments.

<sup>1</sup> Empirical studies of private protection tend to focus on developed economies and emphasize the role of private protection in organized crime (Reuter, 1983).

<sup>2</sup> Private protection organizations may also be engaged in criminal activities, but need not be. These organizations may be linked to larger private organizations that engage in more legitimate forms of economic activity. Thus, we do not equate private protection with Mafia protection.

<sup>3</sup> Yakovlev (1999) demonstrates this point quite well.

<sup>4</sup> Inspectors may keep some of the fines as bribes or as part of their salary.

<sup>5</sup> We recognize that this use of the term regulation is non-standard and do not wish to imply that all regulation is inherently bad.

<sup>6</sup> For example, regulations may increase welfare by reducing uncertainty about the quality of goods sold by shops.

<sup>7</sup> The model generates a third “knife-edge” equilibrium in which the official and unofficial sectors coexist. The model assumes away the possibility that the state uses tax revenue to fight the Mafia.

<sup>8</sup> Johnson, Kaufmann, and Zoido-Lobaton (1998) and Johnson, Kaufmann, and Shleifer (1998) examine the relationship between regulation and the size of the unofficial economy across countries.

<sup>9</sup> The level of regulation influences the performance of legal institutions through the tax channel and the performance of legal institutions has an effect on the level of regulation.

<sup>10</sup> Some of the data from Moscow were previously presented in Frye and Shleifer (1997).

<sup>11</sup> Our survey focused on private and privatized retail trading shops. Privatized shops are former state-owned shops that have been privatized and have not changed ownership since privatization. Private shops are either newly opened shops or shops that had been privatized and then have been sold to a new owner after privatization. In Ulyanovsk we found that private and privatized shops formed only a minority of shops conducting retail trade. Ulyanovsk is one of the few cities in Russia in which state shops still played a significant role in retail trade in 1996. We therefore likely oversampled private and privatized shops in Ulyanovsk. In the regression analysis we control for property type to account for these differences.

<sup>12</sup> The variables used in the paper, the exact formulation of the questions, and descriptive statistics for the answers are given in the Appendix.

<sup>13</sup> It is likely that the respondents answer these questions based on their own experience. It is a standard approach to asking sensitive questions in surveys like this one.

<sup>14</sup> By posing the question in this way, we cannot make inferences about whether the shopkeeper initially contacted the private protection organization or the private protection organization initially contacted the shopkeeper. Constructing a question to address this issue may have made our subjects uncomfortable and therefore been counterproductive. Since most shopkeepers believed that private protection served some purpose, the question of who initiated the contact seems to be less important than if their relationship was purely exploitative.

<sup>15</sup> For many reasons, such as difference in size, administrative and fiscal status, and access to foreign capital, Moscow is not comparable to Smolensk or Ulyanovsk. We include Moscow in the sample for two reasons. First, it allows one to analyze the claim that private protection in Moscow is more prevalent than elsewhere in the country. Second, it allows a baseline comparison for those who are familiar with the business environment in Moscow. Third, in our regressions we control for city-specific characteristics.

<sup>16</sup> Ulyanovsk is one of the few cities in Russia that retained slogans from the communist era in prominent places in the city in 1996.

<sup>17</sup> We do not present direct measures of the size of a firm's business operations actually conducted in the unofficial economy. Pilot surveys found that seeking out such information was counterproductive and only



made the respondents uncomfortable. Answering these kinds of questions required the respondents to admit to engaging in an illegal activity. Perhaps, more importantly, it also required them to reveal financial information that is usually viewed as very sensitive. They were more comfortable answering questions about private protection. It is useful to note that private protection is often legal and therefore should not unnerve respondents unduly.

<sup>18</sup> Differences between the regulatory environments in these countries are statistically significant.

<sup>19</sup> Pop-Eleches (1997) notes that press reports in Romania suggest that private protection is much more common in Bucharest.

<sup>20</sup> As we show, “contact with racket in the last 6 months” is significantly correlated with several measures of regulation for a given city.

<sup>21</sup> In our empirical analysis we treat the variation in regulation across shops as exogenous. However, we believe that levels of regulation as well as public goods provision are determined by the incentives that local governments face. Zhuravskaya (1998) demonstrates that the revenue-sharing arrangements between local and regional governments determine local governments’ incentives to provide public goods and to levy regulations.

<sup>22</sup> Initially, in all regressions we controlled for a variety of shop characteristics, including type of the shop, its location, the number of employees, the perceived financial position of the shop, the number of competitors, number of years the shop is in operation, and the director’s experience in all regressions. These characteristics however, turned out to be insignificant and did not change the coefficients of other variables. Therefore, we do not include them as controls in the reported regressions.

<sup>23</sup> Both of these conjectures are true in our sample. Private shops also may be more likely to be in violation of a regulation given their relatively recent appearance.

<sup>24</sup> The shop’s type of property – state or private-is not statistically significant in most of our results. This is likely due to the small number of state shops included in the sample. This is true for the country as a whole. The vast majority of small shops in Russia are private or privatized.

<sup>25</sup> We do not report data on rates of taxation across cities due to concerns about the validity of the data, but we believe that taxes can serve as another proxy for regulatory burden. We also believe that high rates of taxation have a similar effect on the probability of contact with private protection organizations.

<sup>26</sup> Evaluated at the unconditional mean.

<sup>27</sup> Based on a survey of manufacturing firms, Hendley, Murrell and Ryterman (forthcoming) argue that the ineffectiveness of Russian courts has been greatly overstated.

<sup>28</sup> One common measure of the performance of legal institutions is the use of courts by private businesses. It is, however, difficult to draw clear inferences about the use of courts as a measure of public goods. Infrequent use of courts may mean that shopkeepers believe that the courts work too poorly to merit use. Alternatively, infrequent use of courts may mean that shopkeepers believe that courts work well and are deterred from violating property rights of their business partners. Of course, the former is a far more plausible interpretation in contemporary Russia. Therefore, the use of courts as a measure of public goods is subject to competing interpretations.

<sup>29</sup> The sign of the difference in inspections is as expected.

<sup>30</sup> Vertically sums to 100%.

### **References**

Anderson, Annelise. 1996. "Red Mafiya: A Legacy of Communism," in E. P. Lazear ed., Reform in Eastern Europe: Lessons and Prescriptions. Palo Alto: Stanford University Press.

Aslund, Anders. 1997. "Economic Causes Of Crime in Russia," in J. Sachs and K. Pistor eds., The Rule of Law and Economic Reform in Russia. Boulder, CO: Westview Press.

Buchanan, James. 1980. "A Defense of Organized Crime?" in R. Adreano and J. Siegfried eds., The Economics of Crime. New York: John Wiley and Sons.

Carothers, Thomas. 1998. "Rule of Law Revival," Foreign Affairs, 77:2, 95-106.

Clague, Christopher. 1997. "Introduction," in C. Clague ed., Institutions and Economic Development: Growth and Governance in Less-Developed and Post-Socialist Countries. Baltimore: Johns Hopkins University Press.

Fiorentina, Gianluca, and Peltzman, Samuel 1995. "Introduction," in G. Fiorentina and S. Peltzman eds., The Economics of Organized Crime. Cambridge: Cambridge University Press.

Frye, Timothy, and Andrei Shleifer. 1997. "The Invisible Hand and the Grabbing Hand," American Economic Review Papers and Proceedings, 87: 554-559.

Frye, Timothy. 1997. "Contracting in the Shadow of the State: Private Arbitration Commissions in Russia," in J. Sachs and K. Pistor eds., The Rule of Law and Economic Reform in Russia. Boulder, CO: Westview Press.

Frye, Timothy. 2000. Brokers and Bureaucrats: Building Market Institutions in Russia. Ann Arbor: University of Michigan Press.

Gambetta, Diego. 1994. The Sicilian Mafia: The Business of Private Protection. Cambridge, MA: Harvard University Press.

Grossman, Herschel. 1995. "Rival Kleptocrats: The Mafia Versus the State," G. Fiorentina and S. Peltzman eds., The Economics of Organised Crime. Cambridge: Cambridge University Press.

Handelman, Stephen. 1995. Comrade Criminal: Russia's New Mafiya. New Haven: Yale University Press.

Hay, Jonathan R. and Andrei Shleifer. 1998. "Private Enforcement of Public Law: A Theory of Legal Reform," American Economic Review Papers and Proceedings. 88: 398-403.

Hendley, Kathryn, Peter Murrell and Randi Ryterman, forthcoming. "Law Works in Russia: The Role of Legal Institutions in the Transactions of Russian Enterprises," in Peter Murrell ed., Assessing the Value of the Rule of Law in Transition Economies. Ann Arbor: University of Michigan Press.

Johnson, Simon, John McMillan and Christopher Woodruff. 1998. "Job Creation in the Private Sector: Poland, Romania, Russia, Slovakia and Ukraine Compared." ms. Cambridge, MA. 1-37.

\_\_\_\_\_. 1999a. "Why Do Firms Hide? Bribes and Unofficial Activity After Communism." Center for Economic Policy Research. Discussion Paper Series, 2105. London.

\_\_\_\_\_. 1999b. "Contract Enforcement in Transition." Center For Economic Policy Research. Discussion Paper Series 2081. London.

Johnson, Simon, Daniel Kaufmann, and Andrei Shleifer. 1998. "The Unofficial Economy in Transition," Brookings Papers On Economic Activity. 2: 159-239.

Johnson, Simon, Daniel Kaufmann, and Pablo Zoido-Lobaton. 1998. "Regulatory Discretion and the Unofficial Economy," American Economic Review. 88: 2, 382-392.

Kaufmann, Daniel and Aleksander Kaliberda. 1996. in B. Kaminski, ed., "Integrating the Unofficial Economy into the Dynamics of Post-Socialist Economies," Economic Transition in Russia and the New States of Eurasia. Armonk, NY: M.E. Sharpe.

Klitgaard, Robert. 1995. Annual World Bank Conference on Development. Washington, DC: World Bank.

Millar, James. 1996. "What's Wrong with the Mafiya Anyway?" in B. Kaminski ed., Economic Transition in Russia and the New States of Eurasia. Armonk, NY: M.E. Sharpe.

North, Douglass. 1990. Institutions, Institutional Change, and Economic Performance. Cambridge: Cambridge University Press.

Olson, Mancur. 1993. "Dictatorship, Democracy, and Development," American Political Science Review. 87:3, 567-57.

Pop-Eleches, Cristian. 1997. "Local government and private businesses in Sibui, Romania," ms. Cambridge, MA. pp. 1-13.

Reuter, Peter. 1983. Disorganized Crime: The Economics of the Visible Hand. Cambridge: MIT Press.

Sachs, Jeffrey. 1994. "Russia's Struggle with Stabilization: Conceptual Issues and Evidence," World Bank Research Observer. 57-80.

Sachs, Jeffrey D. and Katharina Pistor. 1997. "Introduction," in Jeffrey D. Sachs and Katharina Pistor eds., The Rule of Law and Economic Reform in Russia. Boulder: Westview Press.

Schelling, Thomas. 1971. "Economics and Criminal Enterprise," in R. Adreano and J. Siegfried eds., The Economics of Crime. New York: John Wiley and Sons.

Shleifer, Andrei and Robert Vishny. 1998. The Grabbing Hand: Government Pathologies and Their Cures. Cambridge, MA and London, England: Harvard University Press.

World Bank Annual Development Report. 1997. Washington, D.C. 1997.

Yakovlev, Andrei. 1999. "Black Cash: Disincentives to Invest in the Formal Economy," ms.  
Moscow. 1-25.

Zhuravskaya, Ekaterina. 2000. "Incentives to Provide Public Goods: Fiscal Federalism, Russian Style," Journal of Public Economics. 76 (3) 337-368.

**Table 1. Descriptive Statistics for Shops in the Cities**

	(i) Ulyanovsk	(ii) Smolensk	(iii) Moscow	Overall mean
Number of employees	15 (2.6)	10 <sup>***</sup> (1.8)	25 <sup>***</sup> (1.7)	16.9 (1.3)
Age of director	38 (0.8)	37 <sup>***</sup> (0.9)	44 <sup>***</sup> (1.04)	39.9 (0.62)
Director's average tenure in this shop (years)	3.4 <sup>***</sup> (0.4)	2.3 <sup>***</sup> (0.3)	8.0 <sup>***</sup> (0.9)	4.57 (0.4)
Experience as director (years)	8.2 (1.0)	9.2 <sup>***</sup> (1.1)	16.8 <sup>***</sup> (1.4)	11.5 (0.7)
Years from opening/privatization of the shop	3.95 (1.2)	2.04 <sup>***</sup> (0.2)	3.47 (0.2)	3.5 (0.3)
Percent of private out of non-state shops	95% <sup>***</sup> (2.8)	82% <sup>***</sup> (4.3)	44% <sup>***</sup> (5.8)	72% (3.1)
Number of competing shops in the neighborhood	2.49 <sup>**</sup> (0.4)	5.23 (1.4)	3.59 <sup>***</sup> (0.3)	4.02 (0.6)
Number of state shops	9	0	0	

*Note:* Means. Standard errors are in parentheses. \*\*, \*\*\* denote statistical significance of the difference in means between different cities at 5% and 1% significance levels respectively: in (i) between Ulyanovsk and Smolensk, in (ii) between Smolensk and Moscow, in (iii) - between Moscow and Ulyanovsk.



**Table 2. Regulation**

	(i) Ulyanovsk	(ii) Smolensk	(iii) Moscow	Overall
<u>Opening a Shop:</u>				
Time to register (months)	1.88 (0.27)	1.23*** (0.33)	2.53* (0.28)	2.02 (0.19)
Number of permits required to open	8.77*** (1.20)	5.29 (0.56)	6.23*** (0.32)	7.45 (0.57)
Number of agencies for registration	6.10** (0.72)	4.43*** (0.42)	6.55 (0.35)	5.64 (0.37)
Total time needed to open (months)	4.81*** (0.63)	2.43 (0.43)	2.72*** (0.43)	3.86 (0.33)
<u>Inspections and fines:</u>				
Number of inspections	21.96 (4.49)	16.22 (4.23)	16.34 (1.70)	18.01 (2.12)
% number of fines to number of inspections	37.83*** (5.13)	18.64*** (3.22)	36.96 (7.00)	28.43 (2.74)

*Note:* Means. Standard errors are in parentheses. \*, \*\*, and \*\*\* denote statistical significance of the difference in means between different cities at 10, 5, and 1% significance levels respectively: in (i) between Ulyanovsk and Smolensk, in (ii) between Smolensk and Moscow, in (iii) between Moscow and Ulyanovsk.

**Table 3. Racket**

	(i) Ulyanovsk	(ii) Smolensk	(iii) Moscow	Overall
Contact with racket in the last 6 months	41.7 (6.07)	40.7 (5.49)	47.4 (5.76)	43.3 (3.31)
Contact with racket ever	56.7 (6.09)	51.9*** (5.59)	86.0*** (3.93)	62.8 (3.50)
Racket as a problem on scale 1-10	3.4* (0.39)	2.5** (0.29)	3.63 (0.41)	3.13 (0.21)

*Note:* Means. Standard errors are in parentheses. \*, \*\*, and \*\*\* denote statistical significance of the difference in means between different cities at 10, 5, and 1% significance levels respectively: in (i) between Ulyanovsk and Smolensk, in (ii) between Smolensk and Moscow, in (iii) between Moscow and Ulyanovsk.

**Table 4. The Racket and Regulation**

Dependent variable - Contact with the racket in the last six months

	Coef.	Marg. effect	Coef.	Marg. effect	Coef.	Marg. effect	Coef.	Marg. effect	Coef.	Marg. Effect
Proxy for regulation:										
1. Time to open	0.14*** (0.04)	0.02								
2. Permits			0.06*** (0.02)	0.02						
3. Agencies					0.16*** (0.03)	0.05				
4. Inspections							0.02** (0.01)	0.002		
5. Time to register									0.09** (0.04)	0.036
State or private/privatized	-0.48 (0.75)	-0.19	-0.68 (0.68)	-0.39	-0.77 (0.66)	-0.34	-1.18** (0.60)	-0.512	-0.87 (0.65)	-0.29
Smolensk dummy	-0.41 (0.27)	-0.15	-0.58** (0.29)	-0.23	0.26 (0.25)	0.08	-0.03 (0.21)	-0.06	0.03 (0.23)	0.01
Ulyanovsk dummy	-0.33 (0.29)	-0.14	-0.51* (0.31)	-0.20	0.09 (0.27)	0.02	0.003 (0.22)	-0.02	-0.05 (0.23)	-0.02
Predicted prob. at $\bar{X}$		0.48		0.51		0.39		0.45		0.43
Pseudo R <sup>2</sup>	0.11		0.09		0.17		0.05		0.03	
Number of observations	164		146		182		213		211	

*Note:* Racket in the last six months equals 1 if the shop had contact with the racket in the last six months, otherwise 0. The independent variable of interest is the severity of the regulatory burden. We use the following proxies: 1) time to open a shop; 2) number of permits needed to open a shop; 3) number of agencies needed to visit; 4) number of inspections per year; 5) time to register the shop. We use a probit model. We report regression coefficients and the change in the probability for a unit change in the independent variables evaluated at mean. Standard errors in parentheses. \*, \*\*, \*\*\* denote significance at 10, 5, and 1% significance levels respectively.

**Table 5. Functions of Private Protection**

Percent of shopkeepers who answered “yes” to the question  
“If the following is a function of the racket”.

Protection from street crime and other rackets	82%
Enforcement of agreements	33%
Dealing with authorities	13%
Investment source	12%
Attraction of customers	1%

*Note:* The answers do not differ significantly across cities.

**Table 6. Rate your biggest problems on a scale of 1-10.**

	Ulyanovsk	Smolensk	Moscow	Overall mean
Taxes	8.38	8.00	8.57	8.30
Capital Shortage	6.97	6.67	6.57	6.72
Rent	6.02	5.58	7.88	6.61
Corruption	6.25	5.42	4.83	5.81
Legal vulnerability	5.72	5.45	5.66	5.60
Competition	4.13	4.65	5.56	4.82
Inflation	4.00	5.45	5.36	4.36
Racket	3.28	2.47	3.63	3.13
Supply	2.97	2.64	3.51	3.05
t-stat on difference in means between Corruption and Racket	5.61***	5.33***	2.34**	7.67***

In the last six months shops:			
Had contact with the racket		Had no contact with the racket	
Taxes	8.29	Taxes	8.19
Capital Shortage	7.20	Capital Shortage	6.50
Rent	6.84	Rent	6.43
Legal vulnerability	6.31	Corruption	5.19
Corruption	5.70	Legal vulnerability	5.01
Competition	4.88	Competition	4.68
Racket	4.57	Inflation	4.51
Inflation	4.17	Supply	3.21
Supply	2.97	Racket	1.95
t-stat on difference in means between Corruption and Racket	2.33**		8.81***

Note: Means. \*\*, \*\*\* denote significance of the difference in means at 5 and 1% significance levels, respectively.

**Table 7. Level of public goods provision by the government**

	(i) Ulyanovsk	(ii) Smolensk	(iii) Moscow
<u>Regional spending on police per capita in 1996 (R1,000 per year)</u>			
- Current rubles	24.62	29.41	88.61
- Current rubles adjusted to price differences	35.68	43.25	70.88
<u>Who helps to resolve disputes (% of total # of shops answered)<sup>30</sup>:</u>			
- Government	3.1***	5.3	4.5
- Racket	76.9	60.8	68.2
- No-one	20.0	33.9	27.3
<u>Role of the government (% of total # of shops answered):</u>			
- Hinders	48.7	34.2***	17.1***
- Neutral	46.2	61.8*	72.9***
- Helps	5.1	3.9	10.0
Needed to use courts but did not	40* (6.3)	26*** (5.1)	49 (6.1)
Used courts in the last two years	19 (4.7)	25 (5.6)	21 (4.7)
Can use courts against government	27 (5.4)	32 (7.1)	43** (5.8)
Can use courts against partner	42 (6.3)	56 (6.7)	61** (5.5)
Asked government for help	41** (6.1)	25 (5.0)	34 (5.7)
If asked government for help, received help	38 (9.0)	43 (11)	86 (16)

*Note:* Means. Standard errors are in parentheses. \*, \*\*, \*\*\* denote statistical significance of the difference in means between different cities at 10, 5, and 1% significance levels respectively: in (i) between Ulyanovsk and Smolensk, in (ii) between Smolensk and Moscow, in (iii) between Moscow and Ulyanovsk.

**Table 8. Racket, Regulation, and Rule of Law**

Dependent variables – 1) five measures of regulatory burden and 2) contact with the racket in the last six months

	Measures of regulatory burden										Racket			
	1. Time to open		2. Permits		3. Agencies		4. Inspections		5. Time to register		Coef.	Marg. Effect	Coef.	Marg. Effect
Needed courts, but did not use	1.23*		2.07*		1.58**		2.43		0.89**		0.58***	0.22		
	(0.73)		(1.22)		(0.67)		(4.57)		(0.41)		(0.18)			
Perceptions of the role of the government		-0.86		-1.46		-1.42**		-6.65*		-0.60*			-0.22*	-0.08
		(0.58)		(0.95)		(0.58)		(3.88)		(0.34)			(0.13)	
State or private/privatized	-1.25	-2.17	0.29	-0.91	0.41	0.67	16.79	19.52	-0.59	-0.01	-1.24**	-0.36	-1.05*	-0.32
	(2.06)	(2.03)	(2.78)	(2.81)	(1.61)	(1.65)	(11.01)	(10.90)	(1.15)	(1.09)	(0.60)		(0.57)	
Smolensk dummy	-0.31	-1.56*	-0.69	-2.01	-3.6***	-1.08	-4.48	-0.28	0.23	0.92**	-0.08	-0.03	-0.22	-0.09
	(0.83)	(0.94)	(1.50)	(1.65)	(0.82)	(0.74)	(5.68)	(5.79)	(0.52)	(0.42)	(0.21)		(0.21)	
Ulyanovsk dummy	-2.3***	-2.3***	-3.4**	-3.1**	-3.5***	-3.5***	-3.90	-1.68	-0.56	-0.44	-0.004	-0.001	-0.16	-0.06
	(0.80)	(0.29)	(1.35)	(1.36)	(0.78)	(0.79)	(5.61)	(5.52)	(0.51)	(0.50)	(0.23)		(0.23)	
Predicted P:												0.43		0.45
R <sup>2</sup>	0.06	0.06	0.02	0.05	0.14	0.14	0.02	0.03	0.04	0.03	0.05		0.03	
Number of observations	169	171	146	149	188	190	224	226	210	213	219		221	

*Notes:* The independent variables of interests are the efficacy of courts as measured by whether firms needed courts but did not use them and perceptions of the role of the local government. We used a probit model for regressions with the racket as dependent variable. For these regressions, we report regression coefficients and the change in the probability for a unit change in the independent variables evaluated at mean. OLS specification is used in regression with regulation proxies. Specification includes city dummies. \*, \*\*, \*\*\* denote significance at 10, 5 and 1% significance levels respectively.

**Table 9. Development of small private business.**

	Ulyanovsk	Smolensk	Moscow
% of small business in total employment. 1995	12.1	15.5	19.5
% of small business in total industrial output. 1995	7.2	8.5	19.3